

OPTISONIC 8300 F

Ultrasonic flowmeter for high-temperature gas and superheated steam

-  Installation, assembly, start-up and maintenance may only be performed by appropriately trained personnel. Check the nameplate for correct operating conditions.
-  This instrument complies with requirements of Low Voltage Directive. Instruments must not be connected to power supply before reading instructions described in the manual.
-  This instrument complies with the requirements of Pressure Equipment Directive. Please refer to the nameplate for operating condition limits. Instruments must not be pressurised before reading instructions described in the manual.
-  The responsibility as to the suitability, intended use and corrosion resistance of the used materials against the measured fluid of this device rests solely with the operator.

 For use in hazardous areas, special codes and regulations are applicable. Instruments must not be connected to power supply before reading instructions described in the supplementary manual.

Special conditions to be observed

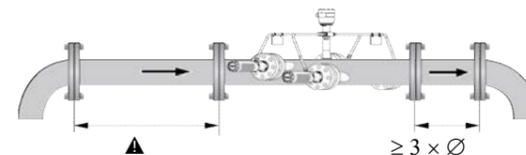
- For ambient and process temperatures, specific product and electrical data, see Ex manual or certificate.
- For dimensions and details of the flameproof joints, the manufacturer shall be contacted.
- The tensile strength of the special fasteners is at least 700 N/mm² (property class A2-70 / A4-70).
- The instructions provided with the product shall be followed in detail to assure safe operation.

Ex ▶ Type Examination Certificate: KIWA 17 ATEX 0025 X / IECEx KIWA 17.0011 X
 KIWA 17ATEX0002X / IECEx KIWA 17.0001X
 UKCA: CSAE 22UKEX1371X / CSAE 22UKEX1288X

1 Installation

Inlet, outlet and T-section

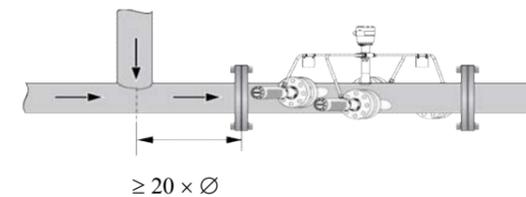
Installation instructions for ≥ DN150/ 6"
 (2 measuring path)
 Consult the manual for DN100/ 4"
 (1 measuring path).



▲ see below "2D and 3D bends"

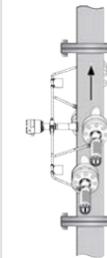
XY (2D bends upstream) : ≥ 20 × Ø

XYZ (3D bends upstream) : ≥ 20 × Ø

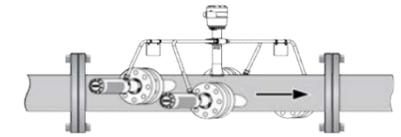


Installation: Depends on 2D/3D bends upstream

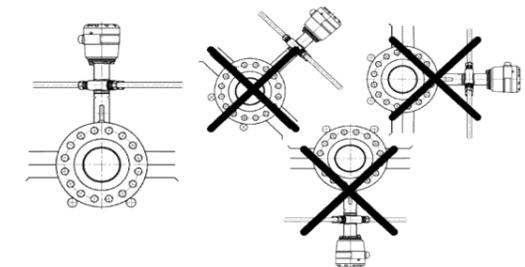
Installation position



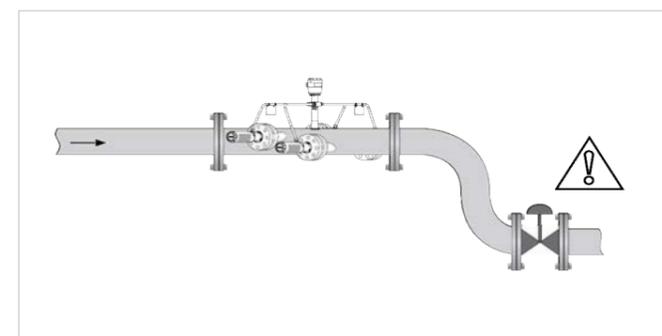
 Dry gas only!



Steam applications



 Check the manual for more details on installation options.



General

OPTISONIC 8000

 Ta = -40...+70°C / -40...+158°F
 Tp = -25...+540°C / -13...+1004°F

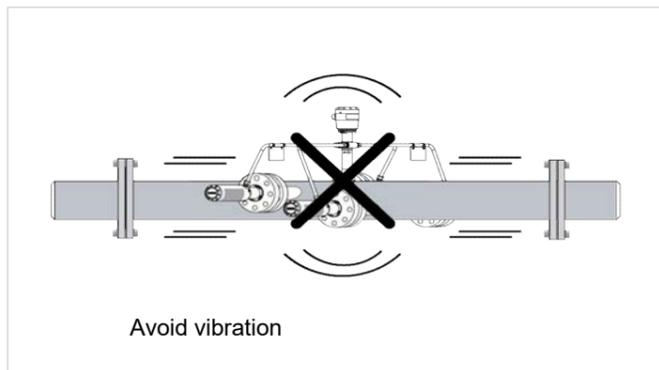
Maximum ambient and process temperatures are depending on version (e.g liner material, size), temperature and protection class and maximum surface temperature of sensor.



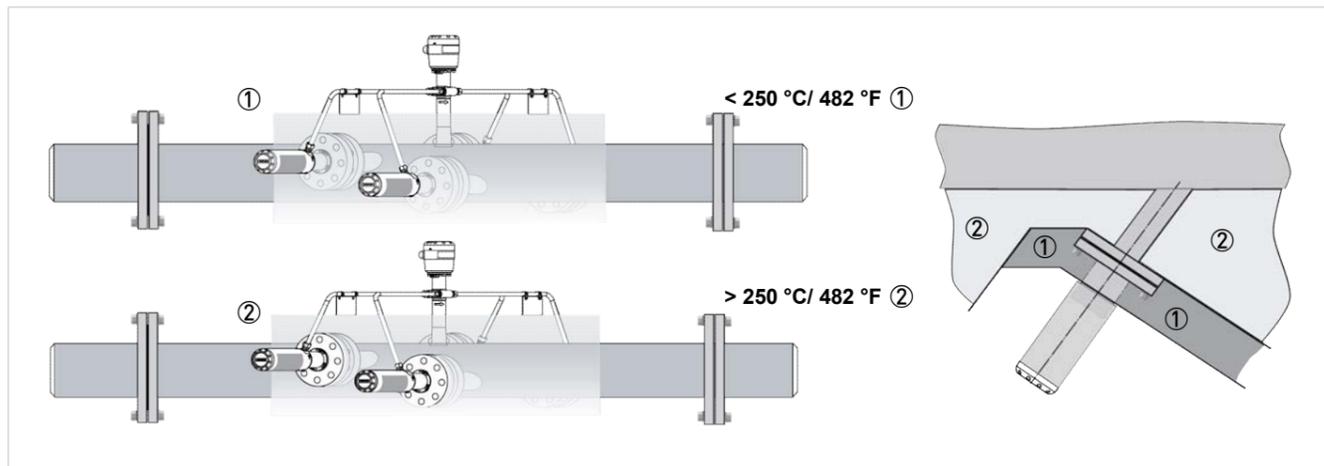
Device nameplate

POWER	CE x Germany	S/N: XXXXXXX
ULN-2	A-Archiv, P+Passive, NC+Not connected	
D	PULSE OUT / STATUS OUT	Imax = 100 mA @ 15 Hz, Umax = 25 mA @ 12 kHz
D	STATUS OUT / CONTROL IN	Imax = 100 mA, Umax = 32 VDC
C	STATUS OUT	
C	STATUS OUT	Imax = 100 mA, Umax = 32 VDC
B	STATUS OUT / CONTROL IN	Imax = 100 mA, Umax = 32 VDC
A	STATUS OUT / CONTROL IN	Imax = 100 mA, Umax = 32 VDC
A	STATUS OUT / CONTROL IN	Imax = 100 mA, Umax = 32 VDC
A	STATUS OUT / CONTROL IN	Imax = 100 mA, Umax = 32 VDC

Check the device nameplate to ensure that the device is delivered according to your order.



Thermal insulation



i Check the manual for more details on installation options.

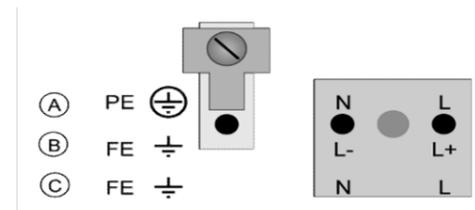
2 Electrical connection

⚡ All work on the electrical connections may only be carried out with the power disconnected. Take note of the voltage data on the nameplate! Observe the national regulations for electrical installations!

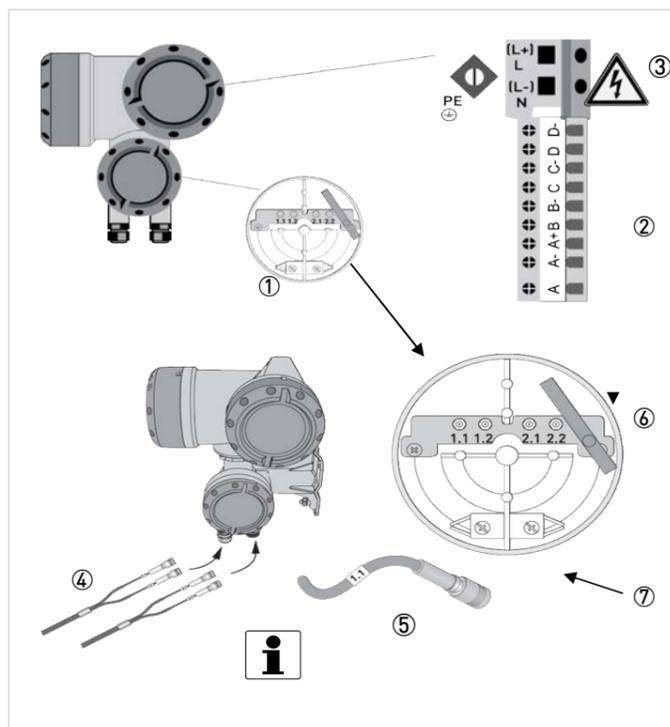
! Observe without fail the local occupational health and safety regulations. Any work done on the electrical components of the measuring device may only be carried out by properly trained specialists.

⚡ The device must be grounded in accordance with regulations in order to protect personnel against electric shocks.

Power supply - grounding



Electrical connections signal converter



- (A) 100...230 VAC (-15% / +10%), 22VA
- (B) 24VDC (-55% / +30%), 12W
- (C) 24VAC/DC (AC: -15% / +10%; DC: -25% / +30%), 22VA or 12W

- ① Sensor cable connections
- ② I/O connections
- ③ Mains supply connection
- ④ Insert cable(s) into terminal compartment
- ⑤ Marking on cable
- ⑥ Tool for releasing connectors
- ⑦ Grounding clamps

i Connect the cable on connector with similar numeral marking

EX Avoid the risk of ignition as a result of electrostatic charging. Do not use the device in areas, with processes that generate high charges, with mechanical friction and cutting process, near electrostatic painting systems (spraying of electrons), with exposure of airborne powder or dust particles (pressurized systems).

2 Electrical connection



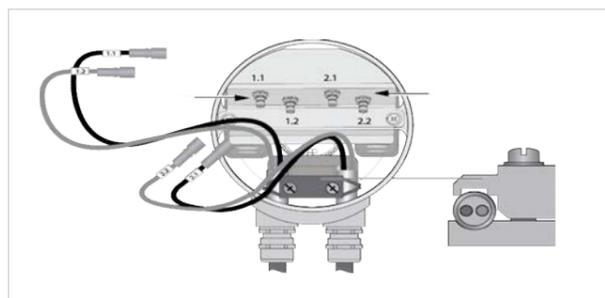
For devices used in hazardous areas, additional safety notes apply; please refer to the Ex documentation.

Refer to the manual for connection of Ex (i) acc. to NAMUR



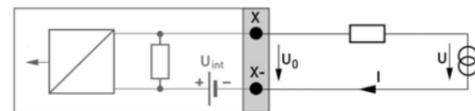
Connect the cable on connector with similar numeral marking

Signal cable to flow sensor

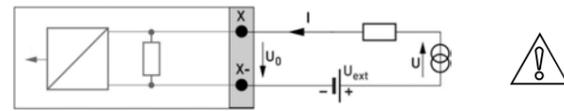


Standard version

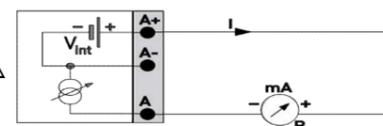
Connection diagram



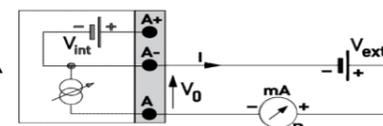
Current input active Iina



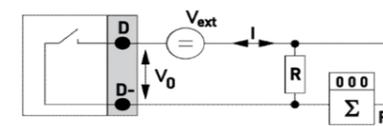
Current input passive Iinp



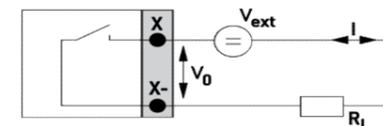
Current output active Ia (basic I/O)



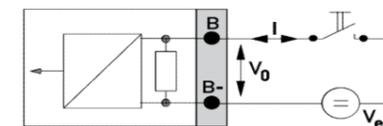
Current output passive Ip (basic I/O)



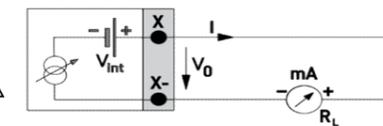
Pulse/frequency output passive Pp (basic I/O)



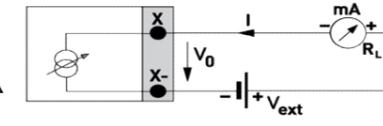
Status output/limit switch passive Sp (basic I/O)



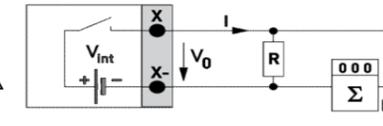
Control input passive Cp (basic I/O)



Current output active Ia (modular/Ex i I/O)



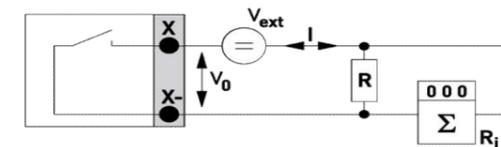
Current output passive Ip (modular/Ex i I/O)



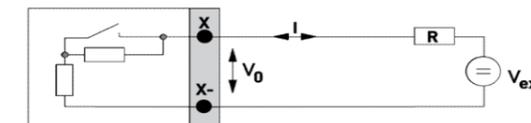
Pulse/frequency output active Pa (modular I/O)



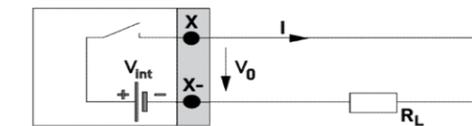
Observe connection polarity



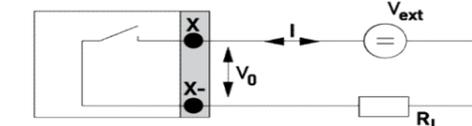
Pulse/frequency output passive Pp (modular I/O)



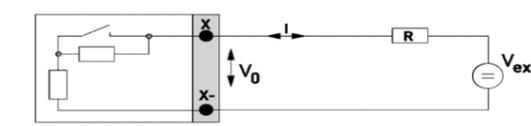
Pulse/ frequency output passive PN, NAMUR (modular I/O)



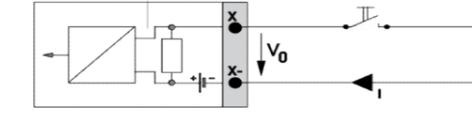
Status output/limit switch active Sa, (modular I/O)



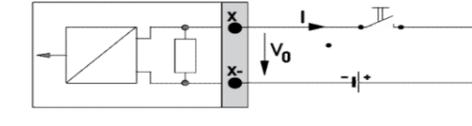
Status output/limit switch passive Sp, (modular I/O)



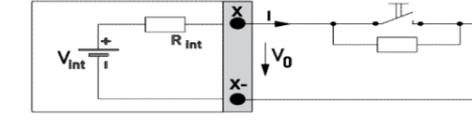
Status output/limit switch SN, NAMUR, (modular I/O)



Control input active Ca, (modular I/O)

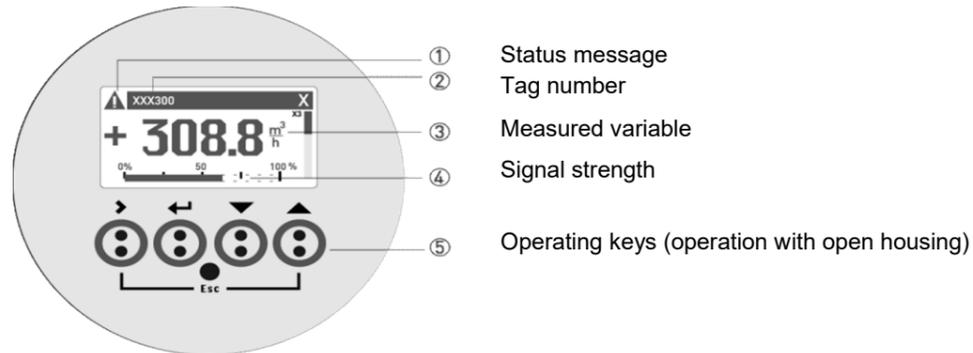


Control input passive Cp, (modular/Ex i I/O)



Control input active CN to NAMUR, (modular I/O)

3 Quick Setup



Measuring mode			
Press > 2.5 s	Select menu	Select Submenu	Functions
↵	A Quick Setup	A1 language	
		A2 tag	>
		A3 reset	↵
		A3.1 reset errors	
		A3.2 totalizer 1	
		A3.3 totalizer 2	
		A3.4 totalizer 3	
		A6 GDC IR interface	

Download documents/software

Scan the code on the nameplate or scan the following code and enter the serial number.



Contact

Select your country from the region / language selector to view your local KROHNE contact details on:

www.krohne.com